



409.1D2.TXT

SEQUENCE LISTING

<110> Barbas, Carlos F.
Burton, Dennis R.
Lerner, Richard A.

<120> Methods for producing antibody libraries
using universal or randomized immunoglobulin light chains

<130> TSRI 409.1D2

<140> US 09/610,551

<141> 2000-07-05

<150> US 08/931,645

<151> 1997-09-16

<150> US 08/300,386

<151> 1994-09-02

<150> US 08/174,674

<151> 1993-12-28

<150> US 08/012,566

<151> 1993-02-02

<150> US 07/954,148

<151> 1992-09-30

<150> US 07/826,623

<151> 1992-01-27

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tcctcaggac	tctactccct	cagcagcgtg	gtgaccgtgc	cctccagcag	cttgggcacc	600
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<223> k = G or T

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<223> k = G or T

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44, 46, 47, 49, 50

<223> n = G, A, T, or C

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<222> 24, 27, 30, 33, 36, 39, 42, 45, 48, 51

<223> k = G or T

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409.1D2.TXT

<222> 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 69

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<223> s = G or C

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<222> 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63,
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 Ser Ser Thr Lys Ile Met Arg Leu Asp Thr
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 Gly Met Phe Arg Arg Gly Phe Tyr Asp Arg
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Gln Gln Tyr Ser Arg His Arg Phe Thr

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Gln Gln Tyr Ser Arg Phe Val Ser Arg Thr
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<400> 62

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gccctaagc tcctgatcta tgctgcatcc aggtttgcaa agtgggggtcc catcaagggt 180
cagtggcagt ggatctggga cagatttcac tctcaccatc agcagtctgc aacctgaaga 240
ttttgcaact tactactgtc aacagagtta cagtaccccg 280

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          20          25          30
Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Ser Pro Ser
          35          40          45
Ala Asn Gly Asp Phe Ala Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
          50          55          60
Thr Ile Ser Arg Asp Lys Ser Lys His Thr Leu Phe Leu Gln Met His
          65          70          75          80
Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys Ala Lys Ala Gly
          85          90          95
Arg Ile Leu Gly Val Val Leu Trp Tyr Ser Leu Tyr Tyr Gly Phe Asp
          100         105         110
Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
          115         120

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Leu Glu Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys
 1           5           10           15
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          20          25          30
Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Ile Gly Trp Ile
          35          40          45
Thr Asn Arg Gly Thr Thr Ser Arg Tyr Ala Gln Lys Phe Gln Gly Arg
          50          55          60
Val Thr Met Thr Arg Asp Ala Ser Ile Ser Thr Val Tyr Met Glu Leu
          65          70          75          80
Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly
          85          90          95
Ala Gly Ala Gly Gly Thr Trp Gly Met Asp Val Trp Gly Gln Gly Thr

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100 105 110
 Thr Val Ile Val Ser Ser
 115

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 Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Ser Pro Asn Arg Gly Ala Thr Arg Phe Ala Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Met Thr Ser Asp Thr Ser Ile Asn Thr Val Tyr
 65 70 75 80
 Met Glu Leu Ser Gly Leu Arg Phe Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Thr Thr Arg Thr Ala Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser
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 <223> Synthesized

<400> 66
 Glu Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
 1 5 10 15
 Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Ile Asn
 20 25 30
 Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala
 35 40 45
 Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
 50 55 60
 Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
 65 70 75 80
 Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Phe Thr Phe
 85 90 95
 Cys Pro Gly Thr Lys Val Asp Ile Lys Arg Thr
 100 105

<210> 67
 <211> 107

<212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthesized

<400> 67
 Glu Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
 1 5 10 15
 Val Thr Ile Thr Cys Arg Ala Ser Gln Arg Ile Ser Ser Tyr Ile Asn
 20 25 30
 Trp Tyr Gln Gln Glu Lys Pro Gly Ala Pro Lys Leu Leu Ile Tyr Ala
 35 40 45
 Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
 50 55 60
 Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
 65 70 75 80
 Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Tyr Thr Phe
 85 90 95
 Cys Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr
 100 105

<210> 68
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthesized

<400> 68
 Glu Leu Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Glu Gly
 1 5 10 15
 Asp Thr Val Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Ser Arg Tyr
 20 25 30
 Ser Asn Trp Tyr Gln Gln Gln Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45
 Ser Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr His Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro
 65 70 75 80
 Gly Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr Ser Ser Pro Phe
 85 90 95
 Thr Phe Cys Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr
 100 105

<210> 69
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthesized

<400> 69
 Glu Leu Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

409.1D2.TXT

Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Thr	Ile	Gly	Thr	Tyr
			20					25					30		
Ile	Asn	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Glu	Ala	Pro	Lys	Leu	Leu	Ile
		35					40					45			
Tyr	Thr	Ala	Ser	Thr	Leu	Gln	Ser	Gly	Val	Pro	Ser	Arg	Phe	Arg	Gly
		50				55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Ser	Tyr	Ser	Thr	Pro	Trp
				85					90					95	
Thr	Phe	Cys	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg	Thr			
			100					105							

<210> 70
 <211> 110
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthesized

Glu	Leu	Val	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10					15		
Asp	Arg	Val	Thr	Ile	Ser	Gly	Cys	Arg	Ala	Ser	Gln	Asn	Ile	Gly	Lys
			20					25				30			
Tyr	Ile	Asn	Trp	Tyr	Arg	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Glu	Leu	Leu
		35					40				45				
Ile	Tyr	Gly	Thr	Ser	Thr	Leu	Gln	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser
		50				55				60					
Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln
65					70					75					80
Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Ser	Tyr	Ser	Thr	Pro
				85					90					95	
Trp	Thr	Phe	Cys	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg	Thr		
			100					105					110		

<210> 71
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthesized

Arg	Ala	Ser	Ser	Asn	Ile	Ser	Ser	Tyr	Ile	Asn
1				5				10		

<210> 72
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthesized

<400> 72

Arg Ala Ser Glu Asn Ile Ser Ser Tyr Ile Asn
 1 5 10

<210> 73

<211> 72

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

<221> modified_base

<222> 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 22, 23,
 25, 26, 28, 29, 31, 32, 34, 35, 37, 38, 40, 41, 43, 44,
 46, 47, 49, 50, 52, 53, 55, 56, 58, 59, 61, 62, 64, 65,
 67, 68, 70, 71

<223> N = G, A, T, or C

<221> modified_base

<222> 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45,
 48, 51, 54, 57, 60, 63, 69, 72

<223> k = G or T

<221> misc_feature

<222> (1)...(72)

<223> This sequence may encompass 3 to about 24 repeats
 of the NNK nucleotide motif

<400> 73

nnknnknnkn nknnknnknn knnknnknnk nnknnknnkn nknnknnknn knnknnknnk 60
 nnknnknnkn nk 72

<210> 74

<211> 72

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

<221> modified_base

<222> 1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 37, 40, 43,
 46, 49, 52, 55, 58, 61, 64, 67, 70

<223> M = A or C

<221> modified_base

<222> 2, 3, 5, 6, 8, 9, 11, 12, 14, 15, 17, 18, 20, 21, 23, 24,
 26, 27, 29, 30, 32, 33, 35, 36, 38, 39, 41, 42, 44, 45,
 47, 48, 50, 51, 53, 54, 56, 57, 59, 60, 62, 63, 65, 66,
 68, 69, 71, 72

<223> N = G, A, T, or C

<221> misc_feature

<222> (1)...(72)

<223> This sequence may encompass 3 to about 24 repeats
 of the MNN motif

409.1D2.TXT

<400> 74

mmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm 60
mmmmmmmmmm mm 72